

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

January 14, 1845.—William Yarrell, Esq., in the Chair.

Mr. Gould exhibited to the Meeting a number of Birds from China, being the first collection forwarded from Amoy to this country.

He described the following new species:—

CORVUS PASTINATOR. *Cor. plumis ptilose saturatè purpurascente-nigris; caudá virescenti; scapulariis tectricibusque caudá maculá semilunari nigrá ad apices ornatis; rostro tarsisque nigris.*

The entire plumage deep shining purplish black or plum-colour, glossed with a greenish hue on the tail-feathers; the scapularies and upper tail-coverts with an obscure crescent-shaped mark of black at the tip; bill and feet shining black.

Total length 18 inches; bill, $2\frac{3}{8}$; wing, 12; tail, 7; tarsi, $2\frac{1}{8}$; middle toe and claw, $2\frac{1}{8}$.

Hab. Chusan.

Remark.—This species is closely allied to the Rook of Europe, but differs from it in the hue of the plumage, which is of a beautiful purple or plum-colour where the European bird is green; the bill is also straighter and the face much less denuded, the fleshy base of the nostrils being the only part destitute of feathers; the feet and claws are also larger.

MERGUS ORIENTALIS. *Mer. (Fœm.) capite cristá colloque rubiginoso-rubris; mento albo; corpore superiore, caudá, alis, lateribusque griseis; primariis ferrugineo-nigris; secundariis albis; corpore inferiore pallide cervino; tectricibus caudæ albidis.*

Female.—Head, neck and crest dark rust-red; chin white; all the upper surface, wings, tail and flanks grey; primaries brownish black; secondaries pure white; under surface cream-colour, fading into white on the under tail-coverts.

Total length 23 inches; bill, $2\frac{1}{2}$; wing, $9\frac{3}{4}$; tail, 5; tarsi, 2.

Hab. Amoy.

Remark.—Nearly allied to the Goosander of Europe, but smaller in size and more delicate in colour than that bird. I believe a male of this bird is in the British Museum; the female is in my own collection, and is the only one I have seen. The specimen in the Museum assimilates as closely to the male of the European bird as the one here described does to the female.

PICA SERICA. *P. capite, collo, pectore et tectricibus caudæ saturatè nigris; tectricibus alarum cinereo-ceruleis, ventre et scapulariis albis; caudá metallicè nigro-viridi; rostro et pedibus nigris.*

Head, throat, chest, upper part of the back, upper and under tail-coverts deep black; secondaries and greater wing-coverts shining steel-blue; spurious wing and edges of the base of the outer webs of the primaries shining deep green; inner webs of the primaries white; the tips of the primaries and the margins of the inner webs for a short distance from the tip black; scapularies and belly pure white; tail greenish black, with bronze reflexions; bill and feet black.

Total length about 19 inches; bill, 2; wing, 8; tail about 12; tarsi, $2\frac{1}{4}$.

Hab. Atoy.

Closely allied to the common Magpie, but differs in the wings being blue instead of green, in the rather less extent of the white, and in having a longer bill and much longer tarsi.

Mr. Gould also exhibited to the Meeting a small species of Mammal, which he characterized as

DROMICIA CONCINNA. *Drom. maculâ nigrâ ante oculos; corpore supernè et parte exteriore crurum pallidè brunneis; crurum parte interiore et corpore subtùs distinctè albis.*

Before the eye a mark of black; all the upper surface, the outer side of the limbs and the tail, pale sandy brown; all the under surface and the inner side of the limbs white; the two colours distinctly separated, or not blending into each other.

Length of the head and body, $3\frac{3}{4}$ inches; of the tail, $3\frac{1}{4}$; of the ear, $\frac{1}{2}$.

Hab. Western Australia.

Very nearly allied to the *Dromicia* of Van Diemen's Land, but distinguished from that animal by its much smaller size, by the distinct separation of the colours of the upper and under surface, and by the absence of any enlargement at the base of the tail.

Also a new Gallatorial bird, which he named

FULICA AUSTRALIS. *Ful. capite colloque nigris; supernè griseo-nigro, subtùs fuliginoso; iridibus rubris; rostro cinereo-cæruleo; vertice viridi-albo; tarsi pedibusque griseis.*

Head and neck black; all the upper surface greyish black; under surface sooty black; irides bright red; bill light bluish grey; crown of the head greenish white; legs and feet French grey.

Total length 14 inches; bill, $1\frac{1}{4}$; wing, 8; tail, $2\frac{1}{4}$; tarsi, $2\frac{1}{4}$.

Hab. Western Australia.

"Descriptions of species of Bats collected in the Philippine Islands, and presented to the Society by H. Cuming, Esq." By G. R. Waterhouse, Esq.

The following descriptions and notices, added to those given in the 'Annals,' vol. xiii. p. 302, include all the species of the order Chiroptera collected by Mr. Cuming in the Philippine Islands; and it is necessary to state, with regard to the descriptions alluded to, that they are all drawn up from specimens preserved in spirit; and although every care has been taken to ascertain the true colouring of the fur as nearly as possible by repeated examinations of the specimens, mounted as they were in clear spirits of wine, the colours may not prove to be exactly as I have supposed.

The following table displays some of the more prominent characters of the species of *Vespertilio* (generally so difficult to determine) about to be described:—

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- A. Wing-membrane extending to the distal end of tibia.
- a. Ears moderate, or rather small, rounded; tragus rather short, rounded at the apex; heel-cartilage short.
- a. 1. Nostrils separated by a moderately wide space, and opening sublaterally 1. *Vesp. tristis*.
- a. 2. Nostrils with a narrow space between them (a distinct notch, however, in that space), and opening almost in front 2. *Vesp. Eschscholtzii*.
- b. Ears large and pointed; tragus long, narrow and pointed; heel-cartilage long.
- b. 1. Hind-foot very large 3. *Vesp. macrotarsus*.
- b. 2. Hind-foot small 4. *Vesp. pellucidus*.
- B. Wing-membrane extending to base of toes.
- a. Ears short, rounded at apex; tragus short, subpointed 5. *Vesp. Meyeni*.
- b. Ears large, pointed; tragus long, attenuated and pointed 6. *Vesp. rafo-pictus*.

VESPERTILIO TRISTIS. *Vesp. vellere molli, nigricanti-fuliginoso; auribus mediocribus, rotundatis; tragis mediocribus arcuatis, apice rotundatis; rostro brevi obtuso; alis angustis.*

	unc. lin.
Longitudo ab apice rostri ad caudæ basin . . .	2 5
———— <i>caudæ</i>	2 5
———— <i>antibrachii</i>	2 1
———— <i>auris</i>	0 3 $\frac{2}{3}$
Alarum amplitudo	13 0

The fur is dense in this species, but not long; dense fur extends on to the head, and leaves but a small portion of the muzzle, which is covered with shorter hair: the general colour is sooty black, and the hairs appear to be uniform to the root; those on the belly are slightly tinted with greyish at the point. The incisor teeth are $\frac{2-2}{6}$. The forehead is much arched; the muzzle short and obtusely rounded, very broad and hairy; the lower lip has a narrow transverse naked area at the tip; the nostrils are sublateral, moderately separated, and there is a slight depression between them. The ears are moderate, rounded, but with the upper, or anterior, margin nearly straight; the tragus is curved, and rather obtusely rounded at the point, about $2\frac{1}{2}$ lines in length, and $1\frac{3}{4}$ line in width. The wings are rather narrow, and have the membranes black; they extend to the heel of the hind-foot, which has the metatarsus narrow and long, the distance from the heel to the base of the toes exceeding the toes in length; the toes are shortish and equal, the nails are also short and but little curved; the heel-cartilage is short, bent back, and not easily brought in a right angle with the tibia, as in many of the species of the present genus. The hind-legs are rather long;

the interfemoral membrane ample, naked above and below, excepting quite at the base; the tail is enclosed to the point in this membrane; the thumb is moderate.

VESPERTILIO ESCHSCHOLTZII. *Vesp. vellere longo fusco-nigricante, corpore subtùs pilis apicibus cinerascentibus; artubus fuscis; auribus brevibus; tragis angustis, ad apicem rotundatis, anticè emarginatis.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin.	2	0
———— caudæ	2	0
———— antibrachii	1	9
———— auris	0	3½
Alarum amplitudo	12	0

Incisor teeth $\frac{2-2}{6}$; the outermost incisor of the upper jaw is smaller than the inner one. The forehead is much arched, and separated, as it were, from the muzzle by a deep transverse depression; on each side of the head is a naked groove, which runs over the eye. The muzzle is short and rounded, naked at the tip only, the other parts moderately well clothed with hairs: the nostrils open almost in front, and are more than usually approximated; their upper boundary is prominent, and there is a deep groove between them. On the inner side of the upper lip are two small fleshy folds, and some compressed tubercles situated toward the angle of the mouth; the lower lip has a narrow triangular naked area at the tip. The ears are short, broad and rounded, but have the upper margin subtruncated; on the inner side are two transverse ridges; the lower part of the ear is extended forwards to the angle of the mouth. The tragus is narrow, curved, rounded at the point, indistinctly emarginated on the outer side, and about $2\frac{2}{3}$ lines in length. The wings are rather narrow, and extend along the hind-leg to the distal end of the tibia only. The hind-legs are moderate; the metatarsus narrow and long, the distance from the heel to the base of the toes exceeding the toes in length; the toes are rather short and nearly equal. The interfemoral membrane is ample, naked, excepting at the base; the heel-cartilage is short; the tail enclosed in the interfemoral membrane to the point; the thumb is very small.

Of the species described in this paper, *Vespertilio Eschscholtzii* approaches most nearly to the *V. tristis*; it is much smaller, however, than that animal, has the thumb smaller in proportion, and its colouring is less dark. Among the species of M. Temminck's Monograph our *V. tristis* most nearly resembles, in the form of its head and ears, the *V. blepotis* (pl. 53. fig. 2.); the *V. Eschscholtzii* (of which Mr. Cuming brought home several specimens) is at least one-third smaller.

VESPERTILIO MACROTARSUS. *Vesp. suprà cinereus, subtùs albicans; auribus longis, angustis, ad apicem acutis, posticè ferè rectis; trago elongato, attenuato, acuto; alis amplis fuscis, ad basin palidioribus.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin. . . .	2	3
————— ad basin auris	0	5
————— <i>caudæ</i>	1	10
————— <i>antibrachii</i>	1	9 $\frac{1}{3}$
————— <i>pollicis</i>	0	3 $\frac{2}{3}$
————— <i>auris</i>	0	6 $\frac{1}{2}$
————— <i>pedis postici a calce ad apicem digiti</i>	0	6 $\frac{1}{2}$
Alarum amplitudo	11	0

The fur on the back is apparently dusky grey next the skin, and pale ashy grey externally, and on the under parts the hairs are grey at the base and whitish at the point. The incisors are $\frac{2-2}{6}$; the pair of incisors on either side of upper jaw nearly equal. The forehead is convex, and separated from the muzzle by a transverse depression: the muzzle somewhat produced and pointed, the mesial portion above and in front naked, the naked portion above extending about two lines from the tip, and separated from the somewhat swollen checks by a longitudinal groove on each side: between the nostrils, which are widely separated and pierced almost laterally, is a shallow groove. The lips have small scattered hairs, excepting at the tip, where they are naked; on the chin is a naked wart somewhat removed from the apex. The ears are largeish and rather narrow, pointed, and have the hinder margin nearly straight. The tragus is narrowish, attenuated, and pointed at the apex. The wings are ample, and the membranes encroach on the back so as to reduce the portion covered with fur to a narrow strip of about half an inch in width; they extend along the hind-leg to the heel only; the thumb is comparatively long; the hind-foot very large, and having the toes equal, excepting the outer one (according to the natural position of the foot, but the toe corresponding to the inner toe in most other animals), which is rather shorter. The interfemoral membrane is moderately ample, and does not extend quite to the tip of the tail, a portion of about one line in length being free. The heel-cartilage is very long.

In the large size of the hind-foot the present species approaches the *V. Hasselii* of Temminck's Monograph, but it does not appear that that species has the wings encroaching on the back as in *V. macrotarsus*; the ears are much larger, the thumb also larger, tail longer, &c. The proportions, as compared with those of M. Temminck's *V. macrodactylus* and *V. brachypterus*, differ considerably, though both these species have the hind-foot large; the larger ears, longer thumb, and more ample wing will serve to distinguish it.

VESPERTILIO PELLUCIDUS. *Vesp. vellere longo, pallidè rufo, corpore subtilùs cinerascanti-albo; alis fuscis, pellucidis; auribus magnis, apice acutis, posticè emarginatis; trago elongato, attenuato; rostro producto, depresso, subacuto.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin. . . .	1	8
————— <i>caudæ</i>	1	9 $\frac{1}{2}$

	unc.	lin.
Longitudo <i>antibrachii</i>	1	3
———— <i>auris</i>	0	7
Alarum amplitudo	9	6

The fur in this animal is long, of a delicate pale rufous on the upper parts of the body, but slightly tinted with grey next the skin; the under parts are ashy white. The incisor teeth are as usual $\frac{2-2}{6}$; the two innermost of the upper jaw are widely separated, long-pointed, and resemble canine teeth; the outer pair are very small. The forehead is considerably arched; the muzzle produced, pointed and depressed, and has a slight concavity above; the nostrils are widely separated, pierced laterally, and have a slight depression between them; the tip of the muzzle is naked. The lower lip has a small, smooth, naked space at the tip. The ears are of a very pale brown colour, large, transparent, pointed, and strongly emarginated behind; the tragus is very long and slender (its length being about $4\frac{2}{3}$ lines, and width at the base less than 1 line), and decreases gradually in width from the base to the point; close to its root, externally, is a slightly prominent angle. The wings are large and supported by very delicate and slender bones, very transparent, and extend slightly on to the toe of the hind-foot. The hind-legs are long and slender; the foot small; the metatarsus shorter than the toes, which are slender and very nearly equal, if we except the one to which the wing is slightly attached, which is distinctly shorter than the rest. The interfemoral membrane is ample, and presents a few scattered hairs: the heel-cartilage long. The tail is long, and enclosed in the membrane to the point; the fourth vertebra from the base has much flesh about it, which forms a small lump,—perhaps this is accidental. The thumb is slender, but rather long.

This species is remarkable for having long and extremely slender limbs, and for the transparency of its flying-membranes. I could read this writing through the wing-membranes, moistened as they were with the spirit, at a distance of more than a quarter of an inch.

VESPERTILIO MEYENI. *Vesp. intensè rufescenti-fuscus, pilis ad basin albescentibus; corpore subtùs cinereo lavato; brachiis rufescentibus; rostro brevi, obtuso; auribus subtriangulis, ad apicem rotundatis, posticè emarginatis; tragus arcuatis, angustis, ad apicem subacutis.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin	1	7
———— <i>caudæ</i>	0	11
———— <i>antibrachii</i>	1	1
———— <i>auris</i>	0	$2\frac{3}{4}$
Alarum amplitudo	6	6

This species has the usual number of incisors ($\frac{2-2}{6}$); the innermost pair of the upper jaw are larger than the external pair, and bifid at the apex. The forehead is moderately arched; the muzzle is broad and but sparingly clothed with hairs, swollen at the sides;

two longitudinal grooves mark the usual external boundaries of the nasal bones; and these grooves, at first shallow, become deeper behind, where they are curved outwards towards the eyes, over which is a small fleshy tubercle; the upper part of the nose (between the two grooves mentioned) is almost naked, but a few minute scattered hairs are observed at the tip, and even in front, and along the edge of the upper lip. The lower lip presents a very small triangular naked patch at the tip. The nostrils are rather widely separated, and open obliquely outwards. The ears are short, subtriangular, have the extreme point rounded, and the posterior border slightly emarginated; on the inner side are three or four transverse rugæ. The tragus is narrow, subpointed, and has a notch in the middle of the external margin. The wings are somewhat narrow, and have the membranes of a very dark brown colour, the limbs being of a dusky purplish red tint; the membrane of the wing extends to the base of the toes. The thumb is small; the hind-legs shortish; the metatarsus short, being about equal in length to the toes, which are very nearly equal, the outer one being but a trifle shorter than the others. The interfemoral membrane is by no means ample, brown above and very pale beneath, where pale scattered hairs are observable, especially near the tail; above, this membrane appears to be naked, excepting at the base. The heel-cartilage is moderate, and on the lower or outer side of this cartilage is an obtusely-angular piece of membrane, about 2 lines in length and 1 line in breadth. The tail has the extreme point free.

I have attached to this and one of the foregoing species the names of two able naturalists who have contributed to our knowledge of the zoological productions of the Philippine Islands.

The *V. Meyeni* apparently approaches most nearly to the *V. tralaticus* of Temminck's Monograph, but has the muzzle broader and more rounded, the ears less pointed, the tail, antibrachium and tibiæ shorter, the latter considerably so; the foot is also shorter and broader than represented in M. Temminck's figure of that species. The colouring (so far as one may judge from specimens preserved in spirit) also differs.

VESPERTILIO RUFO-PICTUS. *Vesp. suprâ ochraceis, pilis ad basin cinereis; corpore subtus flavescenti-albo; alis nigrescentibus, areâ magnâ ad basin, brachiis, membrandque interfemorali rufis; auribus longis, angustis, acutis, posticè distinctè emarginatis; tragis attenuatis, acutis.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin	2	3
————— caudæ	1	11
————— antibrachii	1	11
————— auris	0	5 $\frac{3}{4}$
Alarum amplitudo	13	6

Fur moderate; on the upper parts of the body pale grey at the root, and of a delicate yellow colour externally; on the under parts of the body yellowish white, scarcely tinted with grey at the root. The wing-membranes are black, excepting in the region of the bones of

the fingers and a large area at the base, at which parts they are of a bright red colour; a straight line drawn obliquely across the wing from the thumb to the heel would mark the boundary of the red basal portion. The small strip of membrane above the arm is red, clouded with black. The limbs and interfemoral membrane are also red, and the naked tip to the muzzle, as well as the ears, are very pale flesh-colour. The hinder toes are dusky at the tip.

The forehead is but little arched; the muzzle is produced, but somewhat rounded at the tip, which is the only part which is naked, and even here a few minute scattered hairs are observable in the middle. Above the nose are two longitudinal grooves. The lower lip has a semicircular naked space at the tip, and a tubercle is observed between this point and the throat. The nostrils are lateral, and the space between them is slightly depressed. The ears are long, rather narrow and pointed, and distinctly emarginated behind. The tragus is about $4\frac{1}{4}$ lines long, narrow, attenuated and pointed. The wings are very ample and extend to the base of the toes. The thumb is long; the hind-legs moderately long; the metatarsus shorter than the toes (claws not included), and these are very nearly equal. The interfemoral membrane is moderately ample, well-clothed with hair at the base, and a few longish scattered hairs are observable on other parts, especially on the upper surface. The heel-cartilage is long, extending to within about four and a half lines of the tail.

This species very much resembles the *Vespertilio pictus* of Pallas, but is much larger, and differs in the form and proportions of its ears.

TAPHOZOUS PHILIPPINENSIS. *Taph. vellere brevi fuscescente vel castaneo, corpore subtùs pallidiore; pilis ad basin albescentibus; auribus mediocribus.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin	3	$1\frac{1}{2}$
———— caudæ	0	8
———— ab apice rostri ad basin auris	0	5
———— auris	0	6
———— antibrachii	2	7
———— tibie	0	11
Alarum amplitudo	13	6

This species approaches most nearly to the *Taphozous saccolaimus*, but differs in being considerably smaller, in having the muzzle shorter and more pointed, the ears larger, and the feet considerably smaller; the colouring moreover is different. It agrees with *T. longimanus* in having no throat-pouch or nakedness at that part, but differs in its proportions, &c.

The fur is short and by no means dense, nearly white next the skin both on the upper and under parts of the body; on the upper parts the hairs have the visible portion tipped with reddish brown or chestnut colour, sometimes brown. The under parts are always of a paler hue than the upper, and sometimes almost white, merely suffused with pale chestnut-brown: on the throat this colour is usually more intense. The wing-membranes are brown, sometimes dusky; the interfemoral membrane assumes a paler hue beneath.

The head, viewed from above, presents a triangular figure, of which the tip of the muzzle forms the apex, and is somewhat acute; the nose is slightly prominent; the nostrils terminal, and but slightly separated; the upper lip terminates in a point; the under lip is somewhat swollen at the extremity, and a largeish transverse swelling or tubercle is observed below the chin. The ears have the anterior part running on to the forehead, but separated by a space of about two lines, which space is occupied by the deep frontal pit; they are of moderate size, perhaps might be called rather large; the lateral and anterior margins meet so as to form nearly a right angle; on the anterior margin, which is thickened, is a series of pointed tubercles; the lateral or outer margin is very slightly emarginated, and on the inner side numerous transverse small folds or ridges are perceptible; the point of the ear is narrow, but rounded. The tragus is scarcely 2 lines in length, and about $2\frac{1}{2}$ lines in width, rounded at the apex and contracted at the base. The tail is enclosed in the interfemoral membrane rather less than one-third of its length. The interfemoral membrane is about eleven lines in antero-posterior extent, naked beneath, slightly hairy above to the base of the free portion of the tail, which has a few long scattered hairs. The feet are almost naked, having only a few scattered hairs. The limbs are of a pale dirty flesh-colour.

The teeth most nearly resemble those of skull fig. 11. pl. 60. of Temminck's Monograph, but the incisors are more expanded at the apex than represented in that figure, and very deeply notched. The formulæ are the same, viz. incisors, $\frac{0}{4}$; canines, $\frac{1-1}{1-1}$; molars, $\frac{5-5}{5-5}$, the first false molar of the upper jaw is small and almost hidden by the gum; the second distinct; both first and second false molars of lower jaw are distinct; the latter is most elevated, but the foremost is the largest. The palate has numerous well-developed transverse ridges, seven in number, if we commence from between the canines, in front of which are two others less distinct; the third, which is between the false molars, is most developed. The tongue is thick, but pointed at the apex, and presents a triangular transverse section, extending in its ordinary position to the incisor teeth, which on the inner side are covered by the gum up to their points.

Besides these, and the Philippine Island Bats noticed or described in the 'Annals,' vol. xiii. p. 302, I have to add, as also forming part of Mr. Cuming's collection, a species of *Nycticejus* which agrees most closely with the *N. borbonicus*; this and the *Taphozous philippinensis* appear to be extremely abundant in the Philippine Islands; and lastly, a species of *Dysopes*, which I feel very little doubt is the *D. tenuis* of Horsfield; it agrees most closely with the detailed description and figure given by Temminck.

January 28.—William Horton Lloyd, Esq., in the Chair.

"Description of three new species of Shells belonging to the genus *Artemis*," by Sylvanus Hanley, Esq.

ARTEMIS SIMPLEX. *Art. testá orbiculari-subtrigona, solidá, sub-*

*inæquilaterali, nitidâ, eburneâ, ventricosâ, concentricè et subimbri-
catim sulcatâ; sulcis haud confertis; margine ventrali arcuato;
dorsali utrinque declivi, anticè retuso, posticè arcuato; utraq̃ue
extremitate rotundatâ; lunulâ haud magnâ, impressâ; areâ dorsali
posticâ nullâ. Long. 1·63; lat. 1·55 poll.*

Index Testaceologicus, sup. t. 15. f. 41.

Hab. Panama, St. Elena. Mus. Cuming, Hanley.

The general outline, owing to the abruptness of its slopes, closely resembles that of *excisa*; but in that species the sulci (or rather costellæ) are elevated, the hinder dorsal area is excavated, and the lunule is large and ill-defined. The colour is ivory-white, with usually a zone or two of very pale blue; and, contrary to the other two species, the greatest length is from the beaks to the lower or ventral margin.

ARTEMIS SUBQUADRATA. *Art. testâ suborbiculari, subquadratâ, compressâ, subpellucidâ, valde inæquilaterali, intus extusque albidâ, concentricè substriatâ; margine ventrali posticè arcuato, anticè convexo et sursùm acclivi; dorsali anticè convexo haudque declivi, posticè subrecto et declivi; extremitate posticâ latissimâ, anticâ angustâ; lunulâ magnâ, subobsoletâ. Long. 1·62; lat. 1·75 poll.*

Ind. Test., sup. t. 15. f. 39.

Hab. St. Elena, West Columbia. Mus. Cuming, Hanley.

The peculiar breadth of the posterior side, whose upper or dorsal angle is horizontal, or even ascending, the freedom from incurvation and abrupt slope of the front dorsal line, and the scarcely defined lunule, concur to render this rare shell strikingly different from any known species in this genus.

ARTEMIS SCULPTA. *Art. testâ orbiculari-subquadratâ, magis minusve ventricosâ, solidiusculâ, inæquilaterali, subnitidâ, sordidè albidâ aut albedo-lutescente (nonnunquam pallidè livido-fuscescente alboque marmoratâ), concentricè sulcatâ; striis radiantibus, sulcos confertissimos anticè (plerumque etiam posticè) decussantibus; sulcis medio subimbriatis, ad utramque extremitatem lamellosis; margine ventrali subarcuato; dorsali posticè convexiusculo vixque declivi, anticè retuso et paulò declivi; lunulâ impressâ, ovato-cordatâ; areâ dorsali posticâ nullâ; natibus haud prominentibus. Long. 1·80; lat. 2 poll.*

Ind. Test., sup. t. 15. f. 42.

Hab. Australia? Mus. Hanley, &c.

The radiating lines are not always perceptible on the posterior side of the adult, and the concentric sulci in that case appear fimbriated. It is allied to *subrosea* of Gray.

February 11.—William Yarrell, Esq., in the Chair.

A specimen of *Cancer norvegicus*, taken by a fishing-boat at the "Silver Pits," eighty miles eastward of Scarborough, was presented by Mr. Ingarfield.

A communication was read from James Stark, M.D., F.R.S.E., in which he advocates the hypothesis that the *Tetrao medius* is neither

a hybrid nor a distinct species, but merely an immature male of the *Tetrao Urogallus* or Capercaillie, founding his opinion on the appearance of the *Tetrao medius* immediately after the re-introduction of the Capercaillie into Scotland by the Earl of Breadalbane, and on the fact, that no two species of a genus, however similar they may be in appearance, pair voluntarily while in a state of nature.

February 25.—R. C. Griffith, Esq., in the Chair.

“Descriptions of six new species of *Donax*, in the collection of Hugh Cuming, Esq. (Corr. Memb.),” by Sylvanus Hanley, Esq.

DONAX TICAONICUS. *Don. testá cuneiformi, convexá, nitidissimá, solidá, obliquá, lævigatá, maximè inæquilaterali, albidá, aut livido-purpurascete, concolore, epidermide flavescete indutá; margine ventrali integro, magis minusve convexo; dorsali, anticè declivi et subrecto aut subretuso, posticè subrecto et subitò declivi; extremitate lateris anticì producti, attenuatá, rotundatá; latere postico brevissimo, truncato et infernè obtusè angulatò; pube concentricè et profundè rugosá; natibus acutis, prominentibus; superficie interná aut violacéá aut albidá violacéá posticè fucatá; dente laterali antico remoto, postico approximato.* Long. 1; lat. 1·50 poll.
Hab. Ticao, Philippines (Cuming).

Remarkable for its obliquity and the abrupt truncation of the posterior side.

DONAX CULTER. *Don. testá elongatá, angustá, convexá, satis inæquilaterali, nitidá, striulis exilibus confertim radiatá, variis coloribus pictá (plerumque purpureá, sed etiam flavá lineis purpureo-brunneis radiatá, albidí radiis violaceis aut lividis, aurantiá et roséá, sæpè radiis albidis ornatá); margine ventrali crenulatò, anticè subrecto, posticè convexo; dorsali anticè recto et vix paululùm declivi, posticè convexo satisque declivi; latere antico producto, ad extremitatem obtusè rotundato; postico rotundato-cuneiformi; lunulá ligamentoque angustis; pube striis simplicibus radiatá; costá umbonali obtusissimá; dentibus lateralibus haud remotis.*

Var. a. Testá subinæquilaterali; margine ventrali medio subposticè retuso; dente laterali antico, plerumque magis approximato.

Var. b. Testá minus elongatá et magis inæquilaterali; margine ventrali rarò retuso; dente laterali antico plerumque magis remoto.

Long. 0·50; lat. 1·50.

Hab. *Var. a.* Matzellan, Gulf of California (Cuming).

Var. b. Acapulco (Cuming).

Rather a common shell, and closely allied to *pulchella*.

DONAX ASPER. *Don. testá trigoná, ventricosá, solidá, subinæquilaterali, albidá aut carneá, anticè nitidiusculá et radiatim striatá, posticè impolitá et radiatim costellatá; striis exilibus et simplicibus; costellis parvis, decussatis, aut subsquamosis aut subgranosis, supra costam umbonalem angulatam confertis; margine ventrali crenato, arcuato; dorsali antico, valdè declivi, subrecto; postico retuso, inermi, subitòque declivi: extremitate lateris anticì longioris, rotundatá, posticè angulatá; natibus valdè prominentibus et maximè*

incurvatis; *pube planá*; *dentibus lateralibus approximatis*. Long. 1·30; lat. 1·60 poll.

Hab. Tumbes, Peru (Cuming).

Closely resembling *dentiferus*, but not provided with the characteristic tooth, much stronger and more triangular, and with its ventral edge more arcuated, and its front extremity more attenuated. The front dorsal edge appears retuse (which it is not in reality), from the lateral projection of the swollen beaks. The lower margin is stained with violet anteriorly.

DONAX NAVICULA. *Don. testá elongato-trigoná, crassá, subventricosá, nitidá, subinæquilaterali, sublævigatá (striis radiantibus tantum in medio perspicuis), albá, epidermide flavá indutá, propè marginem dorsalem utrinque brunneo-purpurascente strigatá; margine ventrali in medio ventricoso, intus crenato; dorsali anticè subrecto et subdeclivi, posticè incurvato et declivi; areá posticá lævi, subconcvá; latere antico longiore, angustato, ad extremitatem rotundato; postico cuneiformi, ad extremitatem obtuso; ligamento minimo; costá umbonali obtusá; superficie interná albidá, utrinque supernè purpureá; dentibus lateralibus maximè approximatis.*

Long. 0·40; lat. 0·90 poll.

Hab. Gulf of Nicoya, Central America (Cuming).

Allied to *californiensis*, but more triangular.

DONAX GRACILIS. *Don. testá elongatá, angustá, nitidá, valdè inæquilaterali, compressá, sublævigatá, albidá aut pallidè violaccorufescente, epidermide lutescente indutá; margine ventrali convexo aut subarcuato, haud flexuoso, intus crenulato; dorsali magis minusve livido, utrinque subrecto, anticè vix paululùm declivi, posticè valdè declivi; latere antico producto, attenuato, ad extremitatem rotundato, postico acuminato-cuneiformi; ligamento minimo; areá posticá lævi, obtusissimá; costá umbonali obtusá; superficie interná purpurascente; dentibus lateralibus perspicuis, approximatis.*

Var. b. *Testá albidá, radiis paucis livido-rufescentibus ornatá.*

Var. c. *Testá rufescente aut lividá.*

Long. 0·40; lat. 1 poll.

Hab. Bay of Guayaquil. *Var. b.* Chiriqui. *Var. c.* Bay of Caracas (Cuming).

Allied to *Owenii*, but with the margin crenulated.

DONAX SORDIDUS. *Don. testá abbreviato-cuneiformi, convexá, nitidiusculá, solidá, valdè inæquilaterali, striis exilibus simplicibus confertim radiatá, sordidè albidá; lineis elevatis obliquis subconcentricis, partem superiorem et lævigatam testæ posticè asperantibus; margine ventrali crenulato, medio arcuato; dorsali antico, declivi et subrecto; postico subrecto et valdè declivi; latere antico attenuato; postico brevi et infernè (in adultis etiam supernè) obtusè angulatá; pube fortiter et confertim rugis subdecussatis concentricè exarvatá; costá umbonali subangulatá; superficie interná albidá, purpureo infectá; dentibus lateralibus approximatis, antico permagno.* Long. 0·70; lat. 1 poll.

Hab. Cape of Good Hope. Mus. Brit., Cuming.

Intermediate between *striata* and *semisulcata*. The raised oblique lines which roughen the posterior side near the beaks where the striæ have become entirely obsolete, are a striking character in this rare species.

Mr. Fraser exhibited to the Meeting and characterized three new species of Birds from the Society's collection, viz:—

PALÆORNIS MODESTUS. *Pal. ptilose viridis; genis pallidè cervinis; vittâ a naribus ad oculos viridescenti-nigrâ; mandibulis nigris.*

Hab. — ?

This bird is nearly allied to the *P. pondicerianus*, but differs in the colour of the cheeks, breast and mandibles; it differs also from *P. malaccensis* in the paler colour of the cheeks, and that colour not extending further back than the ears, in the colour of the beak, &c.; it may also be readily distinguished from Mr. Hodgson's Nepaul species by the colouring of the cheeks.

LORIUS SUPERBUS. *Lor. capite et tectricibus majoribus inferioribus alarum nigris; genis, lateribus, pectore et uropygio rubris; nuchâ, ventre, femore, et tectricibus caudæ inferioribus cæruleis; scapulis, tectricibus alarum inferioribus minoribus, et dimidio terminali caudæ cæruleis; alis externis viridibus.*

Hab. — ?

This bird is about the size and is closely allied to the *Lorius Philippensis*, Briss., but differs in having the shoulders and smaller under wing-coverts blue, the larger ones black (in this respect it somewhat resembles the *Lorius domicellus*, Auct.); in the absence of the red band immediately below the black crown; and in having an entire red band from shoulder to shoulder, whereas in *L. Philippensis* it is only partial.

LARUS BRIDGESII. *Lar. ptilose griseus; capite et mento pallidè cinereis; primariis et secundariis nigris, apicibus secundariarum albis, fasciam albam trans alas formantibus; quibusdam primariis apicibus albidis; vittâ nigrâ lat. 1 poll. prope apices remigum; rostro pedibusque nigris.*

Tot. long.	poll. 18
Alæ	11
Cauda	5½
Rictus	2½
Tarsi	2
Digitus medius	1¾

From Valparaiso, Chile. Collected by Mr. Thomas Bridges, Corr. Memb.

This apparently new species of Gull is closely allied to the *Larus fuliginosus*, Gould, but differs in the beak being much more slender, in the general colour being lighter, in the head and chin being nearly white, in having a white band across the wings, and the black band across the tail being more decided.

March 11.—Rev. John Barlow, M.A., F.R.S., Sec. R.I., in the Chair.

A paper by Sylvanus Hanley, Esq., was read, containing descriptions of two new species of *Donax* :—

DONAX ASSIMILIS. *Don. testá cuneiformi, magis minusve crassá, anticè compressá, posticè ventricosá, valdè inæquilaterali, lividá, albo-violascente, aurantiá aut flavidá, zonis saturatioribus aut violaceis plerumque pictá, radiatim striatá; striis haud confertis, anticè simplicibus, posticè elevatis et decussatis; margine ventrali crenulato, haud arcuato, anticè sursum acclinato; dorsali, anticè subdeclivi subrecto aut convexiusculo, posticè subrecto et valdè declivi; latere antico producto, ad extremitatem rotundato et attenuato; postico perbrevis et infernè angulato; costá umbonali subangulatá; pube decussatá, et costellá ad extremitatem dentiferá, sæpè radiatá; ligamento prominente et satis magno; superficie interá in adultis, prope marginem violacéá; dente laterali antico haud remoto, postico subapproximato.* Long. 1; lat. 1.55 poll.

Hab. Panama. Mus. Cuming, Hanley, &c.

Very variable in colouring, often with a short purple perpendicular ray upon the umbones; sometimes with three or four pale rays on a darker ground, but usually uniform and only marked when aged, with the rib-like stria projecting at the margin like a tooth. This latter character and the identity of its sculpture render the species liable to be confused with *dentiferus*, but the greater tenuity and less elongated shape of that shell is preserved even in the younger specimens.

DONAX LUBRICUS. *Don. testá cuneiformi, compressá, solidiusculá, valdè inæquilaterali, nitidissimá, lividá aut albo-violascente, anticè lævigatá, posticè striis radiantibus ornatá; margine ventrali exiliter crenulato, convexo aut convexiusculo; dorsali, utrinque subrecto, anticè declivi, posticè valdè declivi; latere antico attenuato, ad extremitatem rotundato; postico perbrevis et infernè obtusè angulato; vulvá rugis confertis concentricis, striisque exilibus radiantibus, eleganter decussatá; costá umbonali subobtusá; natibus acutis; dentibus lateralibus obsoletis.* Long. 0.6; lat. 0.8 poll.

Hab. —? Mus. Cuming.

Peculiar for uniting a smooth surface to a crenulated margin.

March 25.—William Horton Lloyd, Esq., in the Chair.

Mr. Gould exhibited to the Meeting a new species of *Trogon*, from South America, and seven new Birds from Australia, which he characterized as follows :—

TROGON PUELLA. *Trog. loris, plumis auricularibus et gulá fusconigris; capite, corpore superiore, et pectore aureo-viridibus; alis nigris; tectricibus alarum maculis minimis albis ornatis; corpore inferiore vividè coccineo, separato a viridi pectore fasciá semilunari albá; tribus remigibus exterioribus nigris vittis albis angustis frequentibus ornatis; femoribus nigris.*

Lores, ear-coverts and throat dull black; head, all the upper surface and chest golden green; wings black; the coverts very minutely freckled with white, and the primaries with a very narrow line of

white along the basal portion of their outer webs; all the under surface scarlet, separated from the green of the chest by a semilunar mark of white; two middle tail-feathers golden green; the two next on each side golden green on their outer webs and black on their inner, the whole six tipped with black; the three outer feathers on each side black, crossed by numerous narrow bars of, and narrowly tipped with, white; thighs black; bill orange; irides red; feet dark grey.

Total length, 10 inches; bill, 1; wing, $5\frac{1}{2}$; tail, $5\frac{3}{4}$; tarsi, $\frac{1}{2}$.

Hab. Escuintla, South America.

Remark.—Nearly allied to *Trogon collaris*, Vieill.

CUCULUS OPTATUS. *Cuc. corpore superiore cæruleo-griseo; pogniis internis primariarum fasciis latis albis ornatis; remigibus saturatè violaceo-brunneis; apicibus subalbidis, serie macularum oblongarum albarum alternatim ordinatè; corpore subtùs albo, fasciis nigris.*

The whole of the upper surface slaty grey; inner webs of the primaries broadly barred with white; tail-feathers dark violet-brown, with a row of oblong spots of white placed alternately on either side of the stem, and slightly tipped with white; the lateral feathers have also a row of white spots on the margin of their inner webs; chin and breast light grey; all the under surface buffy white, crossed by bands of black; irides, bill and feet orange.

Total length, 13 inches; bill, $1\frac{1}{4}$; wing, $7\frac{3}{4}$; tail, $6\frac{1}{2}$; tarsi, $\frac{3}{4}$.

Hab. Port Essington, Australia.

Remark.—Closely allied to the Common Cuckoo of Europe.

CUCULUS INSUPERATUS. *Cuc. capite, guld, et corpore superiore cæruleo-griseis; alis, dorsoque nitidè viridescentibus; caudè brunneo-viridi singulè plumè apice albo, et marginibus pogoniorum interiorum ordine macularum albarum triangularium ornatis; parte subscapulari tectricibus caudæ inferioribus, crissoque rufis; corpore subtùs rufo-tincto-griseo.*

Head, throat and all the upper surface dark slate-grey; back and wings glossed with green; tail glossy brownish green, each feather tipped with white, and with a row of triangular-shaped white marks on the margins of the inner webs; primaries and secondaries with a patch of white on their inner webs near the base; edge of the shoulder white; under surface of the shoulder, vent and under tail-coverts rufous; the remainder of the under surface grey, washed with rufous; bill black; feet olive.

Total length, $9\frac{1}{4}$ inches; bill, 1; wing, $6\frac{1}{2}$; tail, 5; tarsi, $\frac{5}{8}$.

Hab. New South Wales.

Remark.—Nearly allied to *C. cineraceus* of Vigors and Horsfield.

CUCULUS DUMETORUM. *Cuc. capite, uropygio, colloque saturatè cæruleo-griseis; alis, caudè dorsoque metallicè brunneis; apicibus remigum leviter albis; pogoniis interioribus serie macularum triangularium parvarum ornatis; pectore griseo, rufo-tincto.*

Head, neck and rump dark slate-grey; back, wings and tail bronzy brown; tail-feathers slightly tipped with white and with a row of

small triangular-shaped spots on the margins of their inner webs; breast grey, washed with rufous; under surface of the shoulder, flanks, vent and under tail-coverts deep rufous; irides brown.

Total length, $8\frac{1}{2}$ inches; bill, $\frac{7}{8}$; wing, 5; tail, $4\frac{1}{2}$; tarsi, $\frac{1}{2}$.

Hab. Port Essington, Australia.

Remark.—Nearly allied to *Cuculus insperatus*.

SPHENÆACUS GRAMINEUS. *Sphen. vittā supra oculos albā; corpore supernè brunneo; mediā plumarum saturatè brunneā; subtūs griseo; lateribus crissoque cervinis; mediā parte singulā plumæ pectoris lineā minimā saturatè brunneā ornatā.*

Stripe over the eye white; all the upper surface brown, the centres of the feathers being dark brown; secondaries brownish black, margined with buff; tail pale reddish brown, with dark brown shafts; under surface grey, passing into buff on the flanks and vent; each feather of the breast with a very minute line of dark brown down the centre; bill and tarsi fleshy brown.

Total length, $5\frac{1}{4}$ inches; bill, $\frac{5}{8}$; wing, $2\frac{1}{4}$; tail, $2\frac{5}{8}$; tarsi, $\frac{3}{4}$.

Hab. Van Diemen's Land and the southern coast of Australia.

PACHYCEPHALA GLAUCURA. *Pach. capite, loris, spatio infra oculos, et latā maculā semilunari trans pectus saturatè nigris; guld, intra maculam nigram, albā; nuchā posteriore, lineā angustā apud latera pectoris pone semilunam nigram, et corpore inferiore flavis; caudā griseā; tectricibus caudæ inferioribus albis vel subflavis.*

Head, lores, space beneath the eye and a broad crescent-shaped mark from the latter across the breast deep black; throat within the black, white; back of the neck, a narrow line down each side of the chest, behind the black crescent, and the under surface yellow; back and wing-coverts yellowish olive; wings dark slate-colour, margined with grey; tail entirely grey; under tail-coverts white, or very slightly washed with yellow; irides reddish brown; bill black; feet dark brown.

Total length, 7 inches; bill, $\frac{5}{8}$; wing, 4; tail, $3\frac{5}{8}$; tarsi, 1.

Hab. Van Diemen's Land.

Nearly allied to *Pachycephala gutturalis*, but distinguished by a shorter bill and by the colouring of the tail, which is entirely grey.

CYSTICOLA CAMPESTRIS. *Cyst. capite ferrugineo-rubro, dorso tectricibusque alarum brunneo-griseis; singulis plumis corporis superioris fasciā longitudinali saturatè brunneā ornatis; caudā rufobrunneā, plumis duabus mediis latā maculā nigrā juxta apices; corpore subtūs pallidè cervino.*

Head rusty red; back and wing-coverts brownish grey, all the feathers of the upper surface with a broad stripe of dark brown down the centre; wings blackish brown, the primaries margined externally with rusty red, and the secondaries edged all round with brownish grey; tail reddish brown, all but the two centre feathers with a large spot of black near the tip; all the under surface pale buff.

Total length, $5\frac{3}{4}$ inches; bill, $\frac{5}{8}$; wing, $2\frac{3}{8}$; tail, $2\frac{3}{4}$; tarsi, $\frac{3}{4}$.

Hab. Australia.

Remark.—For the loan of this new species I am indebted to the kindness of H. E. Strickland, Esq.

CALAMOPHERPE LONGIROSTRIS. *Cal. vittâ pallidâ, supra oculos cervinâ; corpore supernè rufo, subtùs saturatè cervino; mento albido.*

Faint line over the eye fawn-colour; all the upper surface reddish brown, becoming more rufous on the upper tail-coverts; primaries and tail dark brown, fringed with rufous; chin whitish; all the under surface deep fawn-colour; irides yellowish brown.

Total length, $6\frac{1}{2}$ inches; bill, $\frac{1\frac{1}{2}}{16}$; wing, 3; tail, 3; tarsi, 1.

Hab. Western Australia.

MICROSCOPICAL SOCIETY.

June 18, 1845.—Thomas Bell, Esq., F.R.S., President, in the Chair.

A paper by George Shadbolt, jun., Esq., "On a British species of *Ixodes* found upon Cattle," was read.

The insects forming the subject of the present paper were found on some cows belonging to a farmer residing at Chingford, Essex, on the borders of Epping Forest. They are known to the country people by the name of the "Tick," but they are aware that they differ from the insects of that name which infest sheep and goats. They are found upon cattle, attacking all parts indiscriminately, and causing much irritation and annoyance to them. They have been found in the number of several hundreds on a single cow, and have also been known to attack even human subjects, but this is not common, and although it is probable that they infest other animals, the author has seen them only on cows. They do not appear to breed on the animals infested, but are produced in the forest into which the cattle are sent to graze, and which appear to become infested with them by their crawling up their legs while feeding. After having attached themselves by means of a very curious apparatus with which they are furnished, they gorge themselves with blood, and the abdomen increases in size from about the $\frac{1}{10}$ th of an inch until they become as large as a small bean; when fully gorged they fall off, and the author was not able to ascertain their further progress. The form of this insect is oval: it has eight legs, in which particular it differs from the Brazilian species described by Mr. Busk in a former paper read to the Society, these last having but six. These legs are attached to the anterior half of the trunk, and consist of seven joints, the tarsi being terminated by a species of webbed foot, capable of being folded together and furnished with two recurved claws. The oral apparatus by which it attaches itself is exceedingly interesting; it consists of two palpi serving as a kind of sheath to the other parts when inactive, two jointed mandibles, and a barbed or hooked labium. Specimens of this and other species were afterwards exhibited.

Also a paper by H. Deane, Esq., "On the Existence of Fossil *Xanthidia* in the Chalk," was read.

After mentioning that the occurrence of *Xanthidia* in a fossil state had not hitherto been observed in any other situation than in the flint-nodules of the chalk, and consequently that great doubt existed whether these fossils were really independent animal existences or only parts of some other creature, Mr. Deane stated that there is a grayish kind of chalk having no flints, but containing quantities of